



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6950 Americana Parkway, Suite H
Reynoldsburg, Ohio 43068-4127

U.S. Fish and Wildlife Service Lake Erie Watersnake Management Guidelines for Construction, Development, and Land Management Activities May 2, 2003

The Lake Erie watersnake is a federally listed threatened species that occurs on the islands in the western basin of Lake Erie. When an agency or individual is involved in Lake Erie island development activities, the U.S. Fish and Wildlife Service (Service) encourages the use of caution to avoid take of Lake Erie watersnakes. "Take" is defined as to pursue, harm, harass, hunt, wound, kill, trap, capture, collect, or to attempt to engage in any of these activities. "Harm" is further defined as any action that injures or disrupts the normal behavior patterns of the snake. Section 9(a)(1)(B) of the Endangered Species Act states that "it is unlawful for any person subject to the jurisdiction of the United States to take any such species within the United States or the territorial sea of the United States." The Service recommends that anyone planning a development project on the Lake Erie islands should contact us early in the planning stages for project design assistance.

The Service has developed the following guidelines to assist in avoiding take of Lake Erie watersnakes. These season-based guidelines utilize the most current scientific information available and present a general overview of water snake habitat. The guidelines may change as new information becomes available. Although implementation of these guidelines does not remove legal liability associated with take of a Federally threatened species, the Service believes that if you follow these guidelines, you are not likely to incidentally take Lake Erie watersnakes. Furthermore, these guidelines discuss the area of habitat used by 90% of the Lake Erie watersnake population, however all Lake Erie watersnakes are protected from take, no matter where they occur.

Winter Hibernation Habitat Guidelines

Lake Erie watersnakes enter hibernation in September and October, and emerge in April and May. The water snakes hibernate in suitable sites located above water level on both the island shoreline and island interior. Research indicates that 90% of Lake Erie watersnakes hibernate within 528 feet (161 m) of the shoreline. Suitable winter hibernation sites include the following locations: cracks and crevices in bedrock; rock piles; animal burrows; tree root masses and cavities; and human-made structures such as rock walls, erosion barriers, foundations, drainage tiles, building pads, and piled debris on the ground surface. During hibernation, Lake Erie watersnakes are unable to move and are vulnerable to any disturbance of their hibernation sites. Any excavation activity, removal of suitable tree roots, destruction of human-made structures (walls, etc.) or disturbance of other suitable hibernation habitat sites may cause take of Lake Erie watersnakes.

At island sites where suitable winter hibernation habitat exists, excavation activity should not occur during the hibernation season. Activities to be avoided include, but are not limited to, digging foundations, burying utility lines, removing suitable tree roots or hollow tree bases, and destroying suitable human-made structures (walls, foundations, etc.). If such activities must occur during the winter months, excavators should contact us early to seek our technical assistance in exploring methods to avoid take of Lake Erie watersnakes. Contacting us early allows us to review a proposed project, discuss options, address species needs, and find solutions while avoiding project delays. If take is unavoidable, early planning also will help to ensure compliance with Sections 7 and 10 of the Endangered Species Act, while avoiding project delays.

In order to avoid taking Lake Erie watersnakes, excavation of any kind in potential suitable winter hibernation habitat within 528 ft (161 m) of shore should be avoided between October 15 and April 15. Hibernating snakes cannot move at all during low winter temperatures, and are sensitive to disturbance. Excavation activities occurring between April 16 and May 31, or between September 15 and October 14 should only be conducted when air temperatures are above 60 degrees Fahrenheit. When the air temperature is less than 60 degrees Fahrenheit, the water snakes are sluggish and experience difficulty in moving away from excavation equipment. The construction site should be actively monitored for snakes before and during construction by an individual that can identify a Lake Erie watersnake. If Lake Erie watersnakes are encountered during excavation, operations should cease immediately and the monitoring individual should contact us promptly at our Reynoldsburg, Ohio, Field Office (614-469-6923 extensions 12, 15, 16, or 22). Exercising these precautions will help avoid injuring or killing hibernating Lake Erie watersnakes.

In locations that do not contain suitable hibernation habitat (e.g., locations composed purely of topsoil covered by short grasses and forbs with no cracks or crevices present), ground disturbing activities during the hibernation period (i.e., after October 15 and before April 15) are not likely to cause take of Lake Erie watersnakes. Anyone uncertain about whether or not a site contains suitable winter hibernation habitat should contact our Reynoldsburg office.

Summer Habitat Guidelines

During warm months (i.e., from June through September), 90% of Lake Erie watersnakes are found within 69 feet (21 m) of the Lake Erie island shoreline, and within the same distance of ponds, inlets, bays, and marinas within the interior of the islands. Cliffs with crevices, rocky shorelines, and rock-filled structures such as docks, breakwater rocks, and shoreline erosion barriers provide important shelter, breeding and foraging habitat for Lake Erie watersnakes. The water snakes forage for small fish and amphibians near these locations and use spaces among rocks in the structures and along the shoreline for rest, reproduction, and protection from predators.

The shoreline/vegetation interface on the islands, as well as interior island ponds, inlets, bays, and marinas are vital to both the summer and winter survival of Lake Erie watersnakes. Any kind of excavation or removal of shrubs, standing or downed trees, root masses, animal burrows, piled rock, cliffs, or bedrock within 69 feet (21 m) of the shoreline, ponds, inlets, bays, and marinas may cause take of the Lake Erie watersnake. For this reason, if you plan to conduct such activities, you should contact the Service early to seek technical assistance in exploring alternatives that avoid take. Contacting us early allows us to review a proposed project, discuss options, address species needs, and find solutions while avoiding project delays. If take is unavoidable, early planning also will help to ensure compliance with Sections 7 and 10 of the Endangered Species Act, while avoiding project delays.

Summary of habitat management practices, timing, and location where applicable.

Time	Location	Recommendation
Oct 15-April 15	Within 528 feet (161 m) of shore	No Excavation.
April 16-May 31	Within 528 feet (161 m) of shore	Excavation only when temperature above 60° F. Mow at dusk, on high setting.
June 1-Sept 14	Within 69 feet (21 m) of shore	Coordinate all construction and excavation projects along shoreline with Service.
Sept 15-Oct 14	Within 528 feet (161 m) of shore	Excavation only when temperature above 60° F. Mow at dusk, on high setting.

The Service encourages preservation or construction of structures with designs beneficial to water snakes (e.g., certain rock walls, rock-filled crib docks, and rock erosion barriers, etc.) because such structures may provide shelter for the snake. When building or replacing a dock, the Service recommends that you refer to the Ohio Department of Natural Resources (ODNR) Coastal Guidance Sheet No. 9. This can be obtained by contacting ODNR at 419-626-7980, or online at <http://www.dnr.state.oh.us/water/coastal/pubs/cmguide9.pdf>. When conducting such activities, you should also contact us early for technical assistance in exploring alternatives or pursuing necessary compliance with Sections 7 and 10 of the Endangered Species Act. Furthermore, any project that will impact the shoreline or waters of Lake Erie (including marinas, wetlands, and natural ponds), for example the installation of a new dock or shoreline erosion protection structure, must be coordinated with the U.S. Army Corps of Engineers (Corps) to ensure compliance with the Clean Water Act. The Buffalo District of the Corps can be contacted at (716) 879-4330.

In addition to contacting us early in the project planning process, construction projects during warm months (i.e., from June through September) in suitable summer habitat should be actively monitored for Lake Erie watersnakes. The monitoring should be conducted before and during construction by a person that can identify a Lake Erie watersnake. If water snakes are encountered within the project area during construction, operations should cease and the monitoring person should contact us immediately in our Reynoldsburg, Ohio, office (614-469-6923 extensions 12, 15, 16, or 22). Finally, any holes or trenches that are dug should be filled in as soon as possible to prevent water snakes from inadvertently falling into them and becoming trapped. Holes or trenches should be inspected for Lake Erie watersnakes before being filled.

Land Management Guidelines

Tree Removal

Tree root masses may provide suitable hibernation habitat for the Lake Erie watersnake. If you are planning on removing trees on your property, the Service recommends that only the above-ground portion of the tree be removed. The root mass should be left underground, so as not to disturb hibernation locations. Within 69 feet (21 m) of shore, heavy machinery should be limited to paved roads, ramps, etc. so as not to harm water snakes that may have retreated under rocks, logs, and other material.

Mowing

Shoreline vegetation is an important component of Lake Erie watersnake summer habitat. Vegetation provides resting, basking, cover, and mating locations for the snake, while it also provides habitat for native birds, fish, amphibians, and mammals, helps to stabilize banks and prevent erosion, and helps to promote improved water quality. Landowners are encouraged to avoid mowing within 69 feet (21 m) of the shoreline to protect these important habitat and water quality features. During late April and May as Lake Erie watersnakes are emerging from hibernation, and during late September and early October as Lake Erie watersnakes are entering into hibernation, lawn mowing within 69 feet (21 m) of the shore should be completed at dusk, when the snakes will have taken cover for the night. Mowing during these time frames should utilize a high setting, and the area to be mowed should be actively monitored for Lake Erie watersnakes.

Questions

Three people are available in the Service's Reynoldsburg, Ohio office to answer any questions you may have about the Lake Erie watersnake. You may contact our office Monday through Friday, 8am-4pm by dialing 614-469-6923. For questions about U.S. Army Corps of Engineers permits, contact wildlife biologist Megan Seymour (ext.16). For questions about Lake Erie watersnake biology or about the Endangered Species Act, contact endangered species biologist Angela Zimmerman (ext. 22). All questions may also be directed to the office's Supervisor, Dr. Mary Knapp (ext. 12).